



PTO/SB/08A (08-03)

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1 of 8

Complete if Known

Application Number	10/621,803
Filing Date	July 17, 2003
First Named Inventor	Kenneth A. Browne
Art Unit	1636 1637
Examiner Name	To be assigned PANARO, N.
Attorney Docket Number	GP131-03.UT

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
ZAP		US- 5,118,801 A	06-02-1992	Lizardi et al.	
		US- 5,312,728 A	05-17-1994	Lizardi et al.	
		US- 5,639,612 A	06-17-1997	Mitsubishi et al.	
		US- 5,656,462 A	08-12-1997	Keller et al.	
		US- 5,925,517 A	07-20-1999	Tyagi et al.	
		US- 6,037,130 A	03-14-2000	Tyagi et al.	
		US- 6,060,288 A	05-09-2000	Adams et al.	
		US- 6,103,474 A	08-15-2000	Dellinger et al.	
		US- 6,150,097 A	11-21-2000	Tyagi et al.	
		US- 6,171,797 B1	01-09-2001	Perbost	
		US- 6,251,660 B1	06-26-2001	Muir et al.	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
ZAP		WO 01/27327 A3	04-19-2001	Protogene Labs.		
		WO 01/048242 A3	07-05-2001	Mergen Ltd.		

Examiner Signature	<i>Michael Panaro</i>	Date Considered	3/2/05
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Art Unit	1635 1637
Examiner Name	Technologist PANARO, N.
Attorney Docket Number	GP131-03.UT

Sheet	2	of	8
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NON PATENT LITERATURE DOCUMENTS

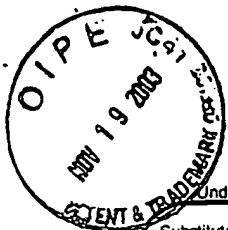
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		ADESSI et al., "Solid phase DNA amplification: characterisation of primer attachment and amplification mechanisms", Nucleic Acids Res., 2000, 28(20/e87):1-8, Oxford University Press, GB.	
		ALSINA, et al., "Backbone Amide Linker (BAL) Strategy for N(alpha)-9-Fluorenylmethoxycarbonyl (Fmoc) Solid-Phase Synthesis of Unprotected Peptide p-Nitroanilides and Thioesters", J. Org. Chem., Nov. 26, 1999, 64(24):8761-9, American Chemical Society, US.	
		ARYA et al., "Solid-Phase Synthesis of Oligomeric Deoxynucleic-Thiourea (DNT) and Deoxynucleic S-Methylthiourea (DNmt): a Neutral/Polycationic Analogue of DNA", Bioorganic & Med Chem Letters, 2000, 10:691-3, Elsevier Science Ltd., GB.	
		BROWN et al., "Molecular beacons attached to glass beads fluoresce upon hybridisation to target DNA", Chem. Commun., 2000, 621-2, Royal Society of Chemistry, GB.	
		CANNE et al., "A General Method for the Synthesis of Thioester Resin Linkers for Use in the Solid Phase Synthesis of Peptide-alpha-Thioacids", Tetrahedron Letters, 1995, 36(8):1217-20, Elsevier Science Ltd, GB.	
		CHAN, et al., "The Biophysics of DNA Hybridization with Immobilized Oligonucleotide Probes", Biophys Journal, Dec 1995, 69:2243-55, Biophysical Society, US.	
		CHU et al., "Inhibition of DNA synthesis by cross-linking the template to platinum-thiol derivatives of complementary oligodeoxynucleotides", Nucleic Acids Res., 1989, 17(12):4783-98, Oxford University Press, GB.	
		CLIPPINGDALE et al., "Peptide Thioester Preparation by Fmoc Solid Phase Peptide Synthesis for Use in Native Chemical Ligation", J Peptide Sci., 2000, 6:225-34, European Peptide Society and John Wiley & Sons Ltd., GB.	
		COLEMAN et al., "Thionucleoside Disulfides as Covalent Constraints of DNA Conformation", Tetrahedron 1999, 55:12009-22, Elsevier Science Ltd., GB.	
		FANG et al., Designing a Novel Molecular Beacon for Surface-Immobilized DNA Hybridization Studies", J. Am. Chem. Soc., 1999, 121:2921-22, American Chemical Society, US.	

Examiner Signature		Date Considered	3/2/05
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10/621,803

Filing Date

July 17, 2003

First Named Inventor

Kenneth A. Browne

Art Unit

~~1637~~ 1637

Examiner Name

To be assigned *ANARog N.*

Attorney Docket Number

GP131-03.UT

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<i>AD</i>		FANG et al., "Molecular Beacons, Novel Fluorescent Probes", Analytical Chemistry, Dec 1 2000, 72:747A-53A. American Chemical Society, US.	
<i>AD</i>		FIDANZA et al., "Use of a Thiol Tether for the Site-Specific Attachment of Reporter Groups to DNA", J. Org. Chem., 1992, 57:2340-6. American Chemical Society, US.	
<i>AD</i>		FLOURIOT, et al., "Improved efficiency for primer extension by using a long, highly-labeled primer generated from immobilized single-stranded DNA templates", Nucleic Acids Res., 1997, 25(8):1658-9. Oxford University Press, GB.	
<i>AD</i>		FUTAKI et al., "Preparation of Peptide Thioesters using Fmoc-Solid Phase Peptide Synthesis and its Application to the Construction of a Template-Assembled Synthetic Protein (TASP)", Tetrahedron Letters, 1997, 38(35):6237-40. Elsevier Science Ltd., GB.	
<i>AD</i>		GOLDSTEIN et al., "An alternate preparation of thioester resin linkers for solid-phase synthesis of peptide C-terminal thioacids", Tetrahedron Letters, 2000, 41:2797-800. Elsevier Science Ltd., GB.	
<i>AD</i>		HAKALA et al., "Detection of Oligonucleotide Hybridization on a Single Microparticle by Time-Resolved Fluorometry: Hybridization Assays on Polymer Particles Obtained by Direct Solid Phase Assembly of the Oligonucleotide Probes", Bioconjug. Chem., 1997, 8:378-84. American Chemical Society, US.	
<i>AD</i>		HAKALA et al., "Time-Resolved Fluorescence Detection of Oligonucleotide Hybridization on a Single Microparticle: Covalent Immobilization of Oligonucleotides and Quantitation of a Model System", Bioconjug. Chem., 1997, 8:232-7. American Chemical Society, US.	
<i>AD</i>		HATAKEYAMA et al., "An Assay for Lectin Activity Using Microtiter Plate with Chemically Immobilized Carbohydrates", Analytical Biochem., 1996, 237:188-92. Academic Press, Inc., US.	
<i>AD</i>		HATCH et al., "Rolling circle amplification of DNA immobilized on solid surfaces and its application to multiplex mutation detection", Genetic Analysis: Biomolecular Engineering, 1999, 15:35-40. Elsevier Science, B.V., GB.	
<i>AD</i>		HEGNER et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions", Federation of European Biochemical Societies Letters, 1993, 336(3):452-6. Elsevier Science Publishers, B.V., GB.	

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Signature

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Date

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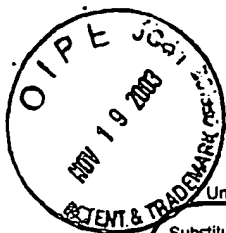
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Sheet 4

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Application Number	10/621,803
Filing Date	July 17, 2003
First Named Inventor	Kenneth A. Browne
Art Unit	1005 1637
Examiner Name	To be assigned PANAROS, N
Attorney Docket Number	GP131-03.UT

NON PATENT LITERATURE DOCUMENTS

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JAP		HIRAYAMA, et al., "Improved immobilization of DNA to microwell plates for DNA-DNA hybridization", Nucleic Acids Res., 1996, 24(20):4098-9. Oxford University Press, GB.	
		HOEG-JENSEN et al., "Amino monothio acids in solid-phase synthesis of peptide thioamides", Int. J. Peptide Protein Res., 1996, 47:190-200. Munksgaard, GB.	
		HOVINEN et al., "Novel Solid Supports for the Preparation of 3'-Derivatized Oligonucleotides: Introduction of 3'-Alkylphosphate Tether Groups Bearing Amino, Carboxy, Carboxamido, and Mercapto Functionalities", Tetrahedron, 1994, 50(24):7203-18. Elsevier Science Ltd., GB.	
		HSIEH et al., "Immobilization of invertase via carbohydrate moiety on chitosan to enhance its thermal stability", Biotech Letters, 2000, 22:1459-64. Kluwer Academic Publishers, Netherlands.	
		INGENITO et al., "Solid Phase Synthesis of Peptide C-Terminal Thioesters by Fmoc/t-Bu Chemistry", J. Am. Chem. Soc. 1999, 121:11369-74. American Chemical Society, US.	
		IVANOV et al., "Effect of Formaldehyde on the Efficiency of Hybridization of DNA Immobilized on Nitrocellulose Filters", 1992, Analytical Biochem., 206:414-8. Academic Press, Inc., US.	
		KATO et al., "Immobilization of DNA onto a Polymer Support and Its Potentiality as Immunoabsorbent", Biotech and Bioengineering, 1996, 51:581-90. John Wiley & Sons, Inc., US.	
		KAWAI et al., "A Simple Method of Detecting Amplified DNA with Immobilized Probes on Microtiter Wells", Analytical Biochem., 1993, 209:63-9. Academic Press, Inc., US.	
JAP		KOLODZIEJ et al., "Stereoselective synthesis of 3-mercaptoproline derivatives protected for solid phase peptide synthesis", Int. J. Peptide Protein Res., 1996, 48:274-80. Munksgaard, GB.	
		KUIJPERS et al., "A New Strategy for the Solid-Phase Synthesis of 5'-Thiolated Oligodeoxynucleotides", Tetrahedron, 1993, 49(47):10931-44. Pergamon Press Ltd., GB.	

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Signature

Michael J. Owens

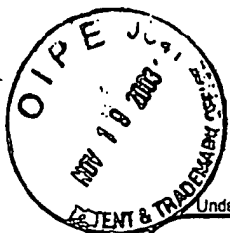
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Examiner Name	To be assigned <i>PANARO, N.</i>
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<i>[Handwritten signature]</i>		KUMAR et al., "The First Analogues of LNA (Locked Nucleic Acids): Phosphorothioate-LNA and 2'-Thio-LNA", Bioorganic & Med Chem Letters, 1998, 8:2219-22. Elsevier Science Ltd., GB.	
		KUMAR et al., "Solid Phase Synthesis and Purification of 5'-Mercaptoalkylated Oligonucleotides", Bioorganica & Med. Chem. Letters, 1996, 6(6):683-8. Elsevier Science Ltd., GB.	
		KUMAR et al., "Solid Phase Synthesis of Oligonucleotides Bearing Phosphate and Thiophosphate at Their 3'-Termini", Chemistry Letters, 1997, 1231-1232. The Chemical Society of Japan, JP.	
		LEVESQUE, et al., "Reverse Transcription and PCR Amplification of Rare mRNAs Immobilized on Oligo(dT) Cellulose", Analytical Biochem, 1993, 213:170-1. Academic Press, Inc., US.	
		LI et al., "Direct preparation of peptide thioesters using an Fmoc solid-phase method", Tetrahedron Letters, 1998, 39:8669-72. Elsevier Science Ltd., GB.	
		LIANG et al., "Polyvalent binding to carbohydrates immobilized on an insoluble resin", Biochemistry, Proc. Natl. Acad. Sci., 1997, 94:10554-9. National Academy of Sciences, US.	
		LIM et al., "A Luminescent Europium Complex for the Sensitive Detection of Proteins and Nucleic Acids immobilized on Membrane Supports", Analytical Biochem., 1997, 245:184-95. AB969961. Academic Press, US.	
		LIU et al., "A Fiber-Optic Evanescent Wave DNA Biosensor Based on Novel Molecular Beacons", Anal. Chem., 1999, 71:5054-9. American Chemical Society, US.	
<i>[Handwritten signature]</i>		LIU et al., "Molecular Beacons for DNA Biosensors with Micrometer to Submicrometer Dimensions", Analytical Biochem., 2000, 283:56-63. Academic Press, US.	
<i>[Handwritten signature]</i>		MANOHARAN et al., "A 2'-O-thiol tether in the ribose moiety of nucleic acids for conjugation chemistry", Gene, 1994, 149:147-56. Elsevier Science B.V., GB.	

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Signature

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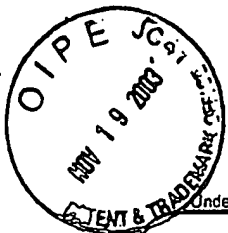
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		MARBLE et al., "RNA Transcription from Immobilized DNA Templates", Biotechnol. Prog., 1995, 11:393-6. American Chemical Society and American Institute of Chemical Engineers, US.	
		MAURO et al., "Fiber-Optic Fluorometric Sensing of Polymerase Chain Reaction-Amplified DNA Using an Immobilized DNA Capture Protein", Analytical Biochem., 1996, 235:61-72. Academic Press, Inc., US.	
		NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, "Characterization and Hybridization Reactions of Surface-Immobilized DNA", J. of Res. of the National Inst. of Standards and Technology, Jan-Feb 1997, 102(1):110. National Institute of Standards & Technology, US.	
		NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, "Method Developed for Electrochemical Quatitation of Surface-Immobilized DNA", J. of Res. of the National Inst. of Standards and Technology, Mar-Apr 1998, 103(2):234. National Institute of Standards & Technology, US.	
		NIKIFOROV et al., "The Use of 96-Well Polystyrene Plates for DNA Hybridization-Based Assays: An Evaluation of Different Approaches to Oligonucleotide Immobilization", Analytical Biochem., 1995, 227:201-9. Academic Press, Inc., US.	
		OKAHATA et al., "Kinetic Studies of Sequence-Specific Binding of GCN4-bZIP Peptides to DNA Strands Immobilized on a 27-MHz Quartz-Crystal Microbalance", Biochemistry, 1998, 37:5666-72. American Chemical Society, US.	
		OKAMOTO et al., "Microarray fabrication with covalent attachment of DNA using Bubble Jet technology", Nature Biotechnology, 2000, 18:438-41. Nature Publications Group, Macmillan Pub. Ltd., GB.	
		PETERLINZ et al., "Observation of Hybridization and Dehybridization of Thiol-Tethered DNA USING Two-Color Surface Plasmon Resonance Spectroscopy", J. Am. Chem. Soc., 1997, 119:3401-2. American Chemical Society, US.	
		PETERSON et al., "Kinetic Control of Hybridization in Surface Immobilized DNA Monolayer Films", J. Am. Chem. Soc., 2000, 122:7837-8. American Chemical Society, US.	
		PIRRUNG et al., "Novel Reagents and Procedures for Immobilization of DNA on Glass Microchips for Primer Extension", Langmuir, 2000, 16:2185-91. American Chemical Society, US.	

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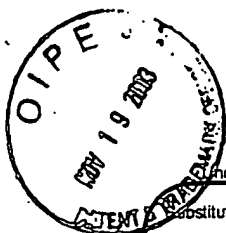
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ZAP		PIVIDORI et al., "Electrochemical genosensor design: immobilization of oligonucleotides onto transducer surfaces and detection methods", Biosensors & Bioelectronics, 2000, 15:291-303. Elsevier Science S.A., GB.	
		RAJAGOPALAN et al., "A Simple Procedure for the Preparation of 4-(alpha-Mercaptobenzyl)Phenoxyacetic Acid, a Thiol Linker Unit Used in Solid Phase Synthesis of Peptide-alpha-Thioacids", Synthetic Communications, 1997, 27(1):187-94. Marcel Dekker, Inc., US.	
		RASMUSSEN et al., "Covalent Immobilization of DNA onto Polystyrene Microwells: The Molecules Are Only Bound at the 5' End", Analytical Biochem., 1991, 198:138-42. Academic Press, Inc., US.	
		RICCELLI et al., "Hybridization of single-stranded DNA targets to immobilized complementary DNA probes: comparison of hairpin versus linear capture probes", Nucleic Acids Res., 2001, 29(4):996-1004. Oxford University Press, GB.	
		ROGERS et al., "Immobilization of Oligonucleotides onto a Glass Support via Disulfide Bonds: A Method for Preparation of DNA Microarrays", Analytical Biochem., 1999, 266:23-30. Academic Press, US.	
		SATOH et al., "Comparison of Methods of Immobilization to Enzyme-Linked Immunosorbent Assay Plates for the Detection of Sugar Chains", Analytical Biochem., 1999, 275:231-5. Academic Press, US.	
		SKRYABIN et al., "A crude lysate of cells immobilized on solid support can serve as a matrix for enzymatic DNA amplification", Nucleic Acids Res., 1990, 18(14):4289. Oxford University Press, GB.	
		STEEL et al., "Immobilization of Nucleic Acids at Solid Surfaces: Effect of Oligonucleotide Length on Layer Assembly", Biophysical Journal, 2000, 79:975-81. Biophysical Society, US.	
		STEEMERS et al., "Screening unlabeled DNA targets with randomly ordered fiber-optic gene arrays", Jan. Nature Biotechnology, 2000, 18: 91-4. Nature Publications Group, Macmillan Pub. Ltd., GB.	
ZAP		STROTHER et al., "Covalent attachment of oligodeoxyribonucleotides to amine-modified Si(001) surfaces" Nucleic Acids Res., 2000, 28(18):3535-41. Oxford University Press, GB.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known	
		Application Number	10/621,803
		Filing Date	July 17, 2003
		First Named Inventor	Kenneth A. Browne
		Art Unit	1637 1637
		Examiner Name	To be assigned PANAROGN
Sheet 8	of 8	Attorney Docket Number	GP131-03.UT

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[Handwritten mark]		TANG et al., "Matrix-assisted laser desorption/ionization mass spectrometry of immobilized duplex DNA probes", Nucleic Acids Res., 1995, 23(16):3126-31. Oxford University Press, GB.	
		WALSH et al., "Optimizing the Immobilization of single-stranded DNA onto glass beads", J. Biochem. Biophys. Methods, 2001, 47:221-31. Elsevier Science, B.V., GB.	
		WEBER et al., "Preparation of surface modified protein nanoparticles by introduction of sulfhydryl groups", International Journal of Pharmaceutics, 2000, 211:67-78. Elsevier Science, B.V., GB.	
		WHITCOMBE et al., "Detection of PCR products using self-probing amplicons and fluorescence", Nature Biotechnology, 1999, 17:804-7. Nature Publications Group, Macmillan Pub. Ltd., GB.	
		WINGER et al., "A Convenient Route to Thiol Terminated Peptides for Conjugation and Surface Functionalization Strategies", Bioconjug Chem., 1995, 6:323-6. American Chemical Society, US.	
		YANG et al., "Adsorption Kinetics and Ligand-Binding Properties of Thiol-Modified Double-Stranded DNA on a Gold Surface", Langmuir, 1998, 14:6121-9. American Chemical Society, US.	
		YANG et al., "Covalent Immobilization of Oligonucleotides on Modified Glass/Silicon Surfaces for Solid-phase DNA Hybridization and Amplification", Chemistry Letters, 1998, 257-8. The Chemical Society of Japan, JP.	
		YANG et al., "Fast Hybridization Solution for the Detection of Immobilized Nucleic Acids", Product Application Focus, BioTechniques, 1995, 18(3):498-503. Eaton Publishing, US.	
[Handwritten mark]		YOO et al., "Synthesis of Oligonucleotides Containing 3'-Alkyl Carboxylic Acids Using Universal, Photolabile Solid Phase Synthesis Supports", J. Org. Chem., 1995, 60:3358-64. American Chemical Society, US.	
[Handwritten mark]		ZHAO et al., "DNA-modified electrodes; part 4: optimization of covalent immobilization of DNA on self-assembled monolayers", Talanta, 1999, 48:751-6. Elsevier Science B.V., GB.	

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